| Project Title  | Funding  | Strategic Plan Objective | Institution   |
|--|----------|--------------------------|---|
| The effects of autism on the sign language development of deaf children (supplement)   | \$1,188  | Q2.Other                 | Boston University   |
| Environmentally Triggered Neurodevelopmental<br>Disorders: Focus on Endocrine Disruption and Sex<br>Differences in Autism, ADHD, and Schizophrenia | \$3,000  | Q7.K                     | University of Arkansas for Medical Sciences                       |
| Extended tracking of single synaptic proteins with upconverting nanoparticles  | \$10,819 | Q2.Other                 | University of California; Lawrence Berkeley National Laboratory   |
| The role of intracellular metabotropic glutamate receptor 5 at the synapse   | \$13,400 | Q2.S.D                   | Washington University in St. Louis                                |
| Selective disruption of hippocampal dentate granule cells in autism: Impact of PT (supplement)   | \$14,596 | Q2.S.E                   | Cincinnati Children's Hospital Medical Center                     |
| 2012 Fragile X and Autism-Related Disorders: From Basic Neuroscience to Improved   | \$15,000 | Q7.K                     | Gordon Research Conferences                                       |
| The neural substrates of social interactions   | \$15,865 | Q2.Other                 | University of Iowa  |
| Autism Registry (supplement)   | \$20,045 | Q7.C                     | Group Health Cooperative  |
| Elucidating the function of class 4 semaphorins in GABAergic synapse formation (supplement)  | \$23,015 | Q2.Other                 | Brandeis University   |
| Project 1: Effect of multi-level environmental exposure on birth outcomes  | \$23,798 | Q3.S.C                   | University of California, Berkeley                                |
| Regulation of 22q11 genes in embroyonic and adult forebrain (supplement)   | \$24,262 | Q2.S.D                   | George Washington University                                      |
| The neural bases of top-down attentional control in autism spectrum disorders  | \$27,578 | Q2.Other                 | City College of New York  |
| Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS   | \$27,814 | Q2.Other                 | Brandeis University   |
| Pragmatics and semantics in autism spectrum disorder   | \$29,155 | Q2.Other                 | City University of New York Graduate School and University Center |
| Reducing obesity risk in children with developmental disabilities  | \$29,999 | Q5.L.D                   | Temple University   |
| Transcriptional regulators in normal human brain development and autism  | \$30,002 | Q2.Other                 | University of California, Los Angeles                             |
| Core B: Outreach and Translation (supplement)  | \$30,783 | Q7.Other                 | University of California, Davis                                   |
| Core D: Molecular Genomics Core (supplement)   | \$30,783 | Q7.Other                 | University of California, Davis                                   |
| Core E: Statistical Analysis Core (supplement)   | \$30,783 | Q7.Other                 | University of California, Davis                                   |
| Project 2: Immunological susceptibility of autism (supplement)   | \$30,784 | Q2.S.A                   | University of California, Davis                                   |
| Core C: Analytical Core (supplement)   | \$30,784 | Q7.Other                 | University of California, Davis                                   |
| Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1   | \$30,912 | Q2.Other                 | Emory University  |
| Elucidation of the developmental role of Jakmip1, and autism-susceptibility gene   | \$31,474 | Q2.Other                 | University of California, Los Angeles                             |
| The striatal circuitry underlying autistic-like behaviors  | \$31,975 | Q2.Other                 | Duke University   |

| Project Title  | Funding  | Strategic Plan Objective | Institution                           |
|--|----------|--------------------------|---------------------------------------|
| Investigation of sex differences associated with autism candidate gene, Cyfip1             | \$32,413 | Q2.S.B                   | University of California, Los Angeles |
| Homeostatic regulation of presynaptic function by dendritic mTORC1                         | \$32,747 | Q2.Other                 | University of Michigan                |
| Cortactin and spine dysfunction in fragile X   | \$32,875 | Q2.S.D                   | University of California, Irvine      |
| Sensitive periods in cerebellar development  | \$32,941 | Q2.S.A                   | University of Maryland, Baltimore     |
| L-type calcium channel regulation of neuronal differentiation                              | \$33,002 | Q2.S.D                   | Stanford University                   |
| Neural mechanisms of imitative behavior: Implications for mental health                    | \$33,128 | Q2.Other                 | University of California, Los Angeles |
| Statistical word learning and non-social visual attention in children with autism          | \$33,148 | Q2.Other                 | University of Wisconsin - Madison     |
| Presynaptic regulation of quantal size by the cation/H+ exchangers NHE6 & NHE9             | \$33,932 | Q2.Other                 | University of California, Berkeley    |
| Trial of a glutamate antagonist in the treatment of OCD and autistic disorders             | \$33,959 | Q4.L.A                   | National Institutes of Health         |
| Mechanism of UBE3A imprint in neurodevelopment   | \$34,439 | Q2.S.D                   | University of California, Davis       |
| Integrative functions of the planum temporale (supplement)                                 | \$34,768 | Q2.Other                 | University of California, Irvine      |
| Robot child interactions as an intervention tool for children with autism (supplement)     | \$35,325 | Q7.H                     | University of Connecticut             |
| Investigating the homeostatic role of MeCP2 in mature brain                                | \$35,832 | Q2.S.D                   | Baylor College of Medicine            |
| Social-emotional development of infants at risk for autism spectrum disorders (supplement) | \$39,002 | Q1.L.B                   | University of Washington              |
| High throughput sequencing of autism spectrum disorder (ASD) endophenotypes                | \$39,432 | Q2.S.G                   | Baylor College of Medicine            |
| Functional role of IL-6 in fetal brain development and abnormal behavior                   | \$42,232 | Q2.Other                 | California Institute of Technology    |
| Molecular controls over callosal projection neuron subtype specification and diversity     | \$42,232 | Q2.Other                 | Harvard University                    |
| Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments             | \$42,232 | Q2.S.D                   | Yale University                       |
| Identification of genetic pathways that regulate neuronal circuits in C. elegans           | \$47,114 | Q2.Other                 | University of California, San Diego   |
| Behavioral, fMRI, and anatomical MRI investigations of attention in autism                 | \$47,114 | Q2.Other                 | Massachusetts Institute of Technology |
| Understanding the role of Epac2 in cognitive function                                      | \$47,232 | Q2.Other                 | Northwestern University               |
| Amygdala connectivity in autism spectrum disorder  | \$49,934 | Q2.L.A                   | University of California, Davis       |
| Validity of an anxious subtype in autism spectrum disorders                                | \$50,294 | Q1.L.B                   | University of California, Los Angeles |

| Project Title   | Funding  | Strategic Plan Objective | Institution   |
|---|----------|--------------------------|---|
| Sensory experiences in children with autism (supplement)                                | \$51,920 | Q1.Other                 | University of North Carolina at Chapel Hill                 |
| Role of neuronal migration genes in synaptogenesis and plasticity                       | \$52,190 | Q2.Other                 | Weill Cornell Medical College                               |
| Cortical dynamics in autism   | \$52,190 | Q2.Other                 | New York University   |
| Population genetics to improve homozygosity mapping and mapping in admixed groups       | \$52,190 | Q3.L.B                   | Harvard Medical School                                      |
| Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination        | \$53,942 | Q2.S.D                   | University of Texas Southwestern Medical Center             |
| Rapid characterization of balanced genomic rearrangements contributing to autism        | \$53,942 | Q3.L.B                   | Massachusetts General Hospital                              |
| Multimodal studies of executive function deficits in autism spectrum disorders          | \$54,570 | Q2.Other                 | Massachusetts General Hospital                              |
| Functional properties and directed connectivity in the face-processing network          | \$55,670 | Q2.Other                 | Yale University   |
| ACE Center: Research Training and Education Core  | \$58,382 | Q7.K                     | Emory University  |
| Role of GluK6 in cerebella circuitry development  | \$58,442 | Q2.Other                 | Yale University   |
| The effects of autism on the sign language development of deaf children                 | \$59,419 | Q2.Other                 | Boston University   |
| FOXP2-regulated signaling pathways critical for higher cognitive functions (supplement) | \$66,686 | Q3.Other                 | University of Texas Southwestern Medical Center             |
| Dysregulation of mTOR signaling in fragile X syndrome (supplement)                      | \$72,034 | Q2.S.D                   | Albert Einstein College of Medicine of Yeshiva University   |
| Visual attention and fine motor coordination in infants at risk for autism              | \$73,123 | Q1.L.A                   | University of Connecticut                                   |
| ACE Center: Administrative Core   | \$73,923 | Q7.Other                 | Emory University  |
| Autism in older adults: A pilot, descriptive study                                      | \$74,000 | Q6.S.A                   | University of North Carolina at Chapel Hill                 |
| Cultural equivalence of autism assessment for Latino children                           | \$74,250 | Q1.S.B                   | University of Wisconsin - Madison                           |
| OCT blockade to restore sociability in 5-HT transporter knock-out mice                  | \$74,250 | Q4.S.B                   | University of Texas Health Science Center at San<br>Antonio |
| Animal-assisted intervention for children with autism spectrum disorder                 | \$75,007 | Q4.L.D                   | Purdue University   |
| Customized representations promote language learning for older learners with ASD        | \$76,500 | Q4.S.G                   | University of Delaware                                      |
| Assessing interactive avatars for use with children with autism                         | \$76,800 | Q4.Other                 | Carnegie Mellon University                                  |
| Components of limited activity monitoring in toddlers with ASD                          | \$82,896 | Q1.L.B                   | Yale University   |
| Pivotal response treatment for infants at risk for ASD: A pilot intervention            | \$83,000 | Q4.L.B                   | Yale University   |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                     |
|--|-----------|--------------------------|---|
| Hypocholesterolemic autism spectrum disorder   | \$84,549  | Q3.L.B                   | National Institutes of Health                   |
| Controlling interareal gamma coherence by optogenetics, pharmacology and behavior        | \$84,775  | Q2.Other                 | Massachusetts Institute of Technology           |
| Emergence and stability of autism in fragile X syndrome (supplement)                     | \$87,314  | Q2.S.D                   | University of South Carolina                    |
| Self-regulation and sleep in children at risk for autism spectrum disorders              | \$87,899  | Q2.S.E                   | University of California, Davis                 |
| Investigating brain connectivity in autism at the whole-brain level                      | \$88,508  | Q2.Other                 | California Institute of Technology              |
| Electrophysiological response to executive control training in autism                    | \$89,670  | Q2.Other                 | University of Washington                        |
| ACE Center: Research, training and education   | \$91,207  | Q7.K                     | Boston University                               |
| Novel candidate mechanisms of fragile X syndrome   | \$92,448  | Q2.S.D                   | Yale University                                 |
| Linking local activity and functional connectivity in autism (supplement)                | \$92,508  | Q2.Other                 | San Diego State University                      |
| Complex genetic architecture of chromosomal aberrations in autism                        | \$92,917  | Q3.L.B                   | Massachusetts General Hospital                  |
| Bayesian variable selection in generalized linear models with missing variables          | \$95,377  | Q2.Other                 | Hunter College (City University of New York)    |
| ACE Center: Data Management and Analysis Core  | \$97,824  | Q7.Other                 | Emory University                                |
| Training in translational social neuroscience  | \$98,163  | Q4.S.B                   | Emory University                                |
| Novel genetic models of autism (supplement)  | \$99,773  | Q4.S.B                   | University of Texas Southwestern Medical Center |
| Neural synchronydysfunction of gamma oscillations in autism (supplement)                 | \$100,386 | Q2.Other                 | University of Colorado Denver                   |
| Neuroimmunologic investigations of autism spectrum disorders (ASD)                       | \$101,877 | Q2.S.F                   | National Institutes of Health                   |
| Cognitive control of emotion in autism   | \$102,638 | Q2.Other                 | University of Pittsburgh                        |
| The computational basis of theory of mind in the human brain                             | \$103,965 | Q2.Other                 | California Institute of Technology              |
| Neuroimaging of top-down control and bottom-up processes in childhood ASD (supplement)   | \$111,600 | Q2.Other                 | Georgetown University                           |
| ACE Center: Administrative Core  | \$114,622 | Q7.Other                 | Yale University                                 |
| New experimental medicine studies: Fast-Fail Trials in autism spectrum disorders         | \$115,889 | Q4.L.A                   | University of California, Los Angeles           |
| Characterizing the genetic systems of autism through multi-disease analysis (supplement) | \$120,328 | Q2.S.G                   | Harvard Medical School                          |
| Identifying therapeutic targets for autism using Shank3-deficient mice (supplement)      | \$121,077 | Q4.S.B                   | Mount Sinai School of Medicine                  |
| Prenatal and neonatal biologic markers for autism (supplement)                           | \$129,464 | Q3.S.C                   | Kaiser Foundation Research Institute            |

| Project Title   | Funding   | Strategic Plan Objective | Institution                                     |
|---|-----------|--------------------------|---|
| Electrophysiological correlates of cognitive control in autism                    | \$130,898 | Q1.L.B                   | University of California, Davis                 |
| MicroRNAs in synaptic plasticity and behaviors relevant to autism                 | \$131,220 | Q2.S.D                   | Massachusetts General Hospital                  |
| Functional imaging of flexibility in autism: Informed by SLC6A4                   | \$132,748 | Q2.S.G                   | Children's Hospital of Philadelphia             |
| Intersensory perception of social events: Typical and atypical development        | \$134,355 | Q1.L.C                   | Florida International University                |
| Development of ventral stream organization  | \$137,338 | Q2.Other                 | University of Pittsburgh                        |
| Risk and resiliency for youth with autism during the transition to adulthood      | \$142,194 | Q6.S.A                   | Vanderbilt University Medical Center            |
| Monolingual and bilingual infants' sensitivity to agreement morphology in Spanish | \$144,100 | Q2.Other                 | Florida International University                |
| The role of Fox-1 in neurodevelopment and autistic spectrum disorder              | \$145,757 | Q2.Other                 | University of California, Los Angeles           |
| Defining the electrophysiological dynamics of the default mode network            | \$146,025 | Q2.Other                 | University of Washington                        |
| Functional analysis of rare variants in genes associated with autism              | \$146,625 | Q4.S.B                   | Yale University                                 |
| Novel metabolic biomarker for autism spectrum disorder                            | \$148,327 | Q1.S.E                   | Greenwood Genetic Center                        |
| Grammatical development in boys with fragile X syndrome and autism                | \$148,500 | Q2.S.D                   | University of Wisconsin - Madison               |
| Sensory integration and language processing in autism                             | \$149,556 | Q1.L.C                   | University of Rochester                         |
| Multimodal imaging of social brain networks in ASD                                | \$150,036 | Q2.Other                 | San Diego State University                      |
| Sex differences in early brain development; Brain development in Turner syndrome  | \$155,873 | Q2.S.D                   | University of North Carolina at Chapel Hill     |
| Motor control and cerebellar maturation in autism                                 | \$157,148 | Q2.Other                 | University of Texas Southwestern Medical Center |
| Structural and functional neuroimaging of the auditory system in autism           | \$157,905 | Q2.Other                 | Children's Hospital of Philadelphia             |
| 3/3-Sequencing autism spectrum disorder extended pedigrees                        | \$160,000 | Q3.L.B                   | University of Pennsylvania                      |
| The intersection of autism and ADHD   | \$160,519 | Q1.L.B                   | Washington University in St. Louis              |
| Functional neuroimaging of psychopharmacologic intervention for autism            | \$162,369 | Q2.L.B                   | University of North Carolina at Chapel Hill     |
| Neurobehavioral investigation of tactile features in autism spectrum disorders    | \$162,666 | Q2.Other                 | Vanderbilt University Medical Center            |
| Multimodal brain imaging in autism spectrum disorders                             | \$167,832 | Q2.Other                 | University of Washington                        |
| Translational developmental neuroscience of autism                                | \$168,116 | Q1.L.B                   | New York University School of Medicine          |
| Identification of candidate genes at the synapse in autism spectrum disorders     | \$168,839 | Q2.Other                 | Yale University                                 |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                       |
|--|-----------|--------------------------|---|
| Structural and functional connectivity of large-scale brain networks in autism                 | \$168,978 | Q2.Other                 | Stanford University                               |
| EEG-based assessment of functional connectivity in autism                                      | \$175,042 | Q2.Other                 | Kennedy Krieger Institute                         |
| Young development of a novel PET ligand for detecting oxytocin receptors in brain (supplement) | \$176,000 | Q2.Other                 | Emory University                                  |
| Activity-dependent phosphorylation of MeCP2  | \$177,055 | Q2.S.D                   | Harvard Medical School                            |
| Genetic dissection of restricted repetitive behavior (RRB)                                     | \$177,736 | Q2.S.G                   | Seattle Children's Hospital                       |
| Developing a novel treatment for restricted inflexible behavior                                | \$178,061 | Q4.Other                 | University of Florida                             |
| Reducing barriers to autism care in Latino children  | \$179,521 | Q1.S.C                   | Oregon Health & Science University                |
| Pathophysiology of MECP2 spectrum disorders (Career Development Award Proposal)                | \$179,981 | Q2.S.D                   | Baylor College of Medicine                        |
| Auditory processing training: A novel treatment for sound hypersensitivities in autism         | \$181,154 | Q4.S.C                   | Cognionics  |
| Neural predictors of language function after intervention in children with autism              | \$181,332 | Q1.L.B                   | University of California, Los Angeles             |
| Developmental social neuroscience in infants at-risk for autism                                | \$181,367 | Q1.L.C                   | Yale University                                   |
| Sensory based CNS diagnostics for the clinic   | \$181,885 | Q1.S.B                   | University of North Carolina at Chapel Hill       |
| Longitudinal characterization of functional connectivity in autism                             | \$182,352 | Q2.L.A                   | University of Utah                                |
| Pharmacotherapy of pervasive developmental disorders   | \$182,830 | Q4.L.C                   | Indiana University-Purdue University Indianapolis |
| A neural model of fronto-parietal mirror neuron system dynamics                                | \$183,960 | Q2.Other                 | University of Maryland, College Park              |
| Regulation of spine morphogenesis by NrCAM   | \$185,000 | Q2.Other                 | University of North Carolina at Chapel Hill       |
| Developing the autism model of implementation for ASD community providers                      | \$185,333 | Q5.L.A                   | San Diego State University                        |
| Autism: Neuropeptide hormones and potential pathway genes                                      | \$185,338 | Q2.S.G                   | University of Illinois at Urbana Champaign        |
| ACE Center: Neural assays and longitudinal assessment of infants at very high risk for ASD     | \$186,019 | Q1.L.A                   | University of California, Los Angeles             |
| Tooth pulp as a source for neuronal precursor cells to study neurogenetic disorders            | \$187,344 | Q4.S.B                   | University of Tennessee Health Science Center     |
| The Charge Study: Childhood Autism Risks from Genetics and the Environment (supplement)        | \$188,012 | Q3.S.C                   | University of California, Davis                   |
| The use of interactive television in identifying autism in young children                      | \$188,750 | Q1.S.A                   | University of Kansas Medical Center               |
| Sensor-based technology in the study of motor skills in infants at risk for ASD                | \$191,070 | Q1.L.A                   | University of Pittsburgh                          |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| ACE Center: Neuroimaging signatures of autism: Linking brain function to genes and behavior | \$191,823 | Q2.S.G                   | University of California, Los Angeles                     |
| Multisensory integration in children with ASD   | \$192,136 | Q2.Other                 | University of California, Davis                           |
| Functional neuroimaging of attention in autism  | \$192,365 | Q2.S.E                   | Children's Hospital of Philadelphia                       |
| The neural substrates of higher-level learning in autism                                    | \$192,500 | Q2.Other                 | University of California, Davis                           |
| In vivo targeted gene silencing, a novel method   | \$192,500 | Q2.Other                 | Indiana University-Purdue University Indianapolis         |
| Abnormal network dynamics and "learning" in neural circuits from Fmr1-/- mice               | \$192,500 | Q2.S.D                   | University of California, Los Angeles                     |
| Gene dosage imbalance in neurodevelopmental disorders (supplement)                          | \$195,000 | Q1.S.E                   | Weis Center for Research - Geisinger Clinc                |
| ACE Center: Neuroimaging/Neurophysiology Core   | \$195,745 | Q7.Other                 | University of California, Los Angeles                     |
| Decoding 'what' and 'who' in the auditory system of children with autism spectrum disorders | \$197,500 | Q2.Other                 | Stanford University                                       |
| Assisted reproductive technologies and increased autism risk                                | \$200,000 | Q3.L.C                   | Columbia University                                       |
| ACE Center: Data Management and Analysis Core   | \$201,589 | Q7.Other                 | Yale University   |
| ACE Center: The ontogeny of social vocal engagement and its derailment in autism            | \$201,683 | Q1.L.A                   | Emory University  |
| The genetic control of social behavior in the mouse (supplement)                            | \$201,966 | Q2.Other                 | University of Hawai'i at Manoa                            |
| Diffusion tensor MR spectroscopic imaging in human brain                                    | \$203,715 | Q2.Other                 | University of New Mexico Health Sciences Center           |
| Core D: Clinical Neuroscience Services  | \$207,706 | Q7.Other                 | Vanderbilt University Medical Center                      |
| ACE Center: Administrative Core   | \$208,325 | Q7.Other                 | University of California, Los Angeles                     |
| Novel regulatory network involving non-coding role of an ASD candidate gene PTEN            | \$208,750 | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Exploring interactions between folate and environmental risk factors for autism             | \$208,782 | Q3.S.J                   | University of California, Davis                           |
| Metacognition in comparative perspective  | \$210,561 | Q2.Other                 | University at Buffalo, The State University of New York   |
| Service transitions among youth with autism spectrum disorders                              | \$212,584 | Q6.L.B                   | Washington University in St. Louis                        |
| 2/5-Randomized trial of parent training for young children with autism                      | \$213,407 | Q4.S.D                   | The Ohio State University                                 |
| Adapting cognitive enhancement therapy for ASD  | \$213,586 | Q4.Other                 | University of Pittsburgh                                  |
| Treatment of sleep disturbances in young children with autism                               | \$214,889 | Q4.S.H                   | University of Pittsburgh                                  |
| Neurobiological signatures of audiovisual speech perception in children in ASD              | \$217,886 | Q2.Other                 | Haskins Laboratories, Inc.                                |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                       |
|--|-----------|--------------------------|---|
| Building a selective inhibitory control tone in autism: An rTMS study            | \$219,780 | Q4.Other                 | University of Louisville                          |
| Effect of paternal age on mutational burden and behavior in mice                 | \$222,000 | Q2.Other                 | University of North Carolina at Chapel Hill       |
| A network approach to the prediction of autism spectrum disorders                | \$223,949 | Q1.L.A                   | Indiana University                                |
| The microstructural basis of abnormal connectivity in autism (supplement)        | \$226,217 | Q7.H                     | University of Utah                                |
| Teaching skills to toddlers: A program for caregivers                            | \$227,719 | Q5.L.A                   | University of Connecticut                         |
| Transgenic and knockout approaches to study protocadherin function               | \$228,750 | Q4.S.B                   | The Ohio State University                         |
| 3/5-Randomized trial of parent training for young children with autism           | \$230,655 | Q4.S.D                   | University of Rochester                           |
| 2/3-Sequencing autism spectrum disorder extended pedigrees                       | \$231,688 | Q3.L.B                   | University of Washington                          |
| Influence of attention and arousal on sensory abnormalities in ASD               | \$232,500 | Q2.Other                 | University of California, San Diego               |
| ACE Center: Research Education and Training Core                                 | \$233,017 | Q7.K                     | University of California, Los Angeles             |
| Measuring social networks among parents and autism heath care providers          | \$234,000 | Q5.Other                 | University of Chicago                             |
| 4/5-Randomized trial of parent training for young children with autism           | \$235,418 | Q4.S.D                   | Indiana University-Purdue University Indianapolis |
| 5/5-Randomized trial of parent training for young children with autism           | \$236,220 | Q4.S.D                   | University of Pittsburgh                          |
| Modeling the serotonin contribution to autism spectrum disorders                 | \$236,532 | Q4.S.B                   | Vanderbilt University Medical Center              |
| Phase II. Digital interactive scene program for language in autism (DISPL-A)     | \$236,912 | Q4.S.G                   | Monarch Teaching Technology, Inc.                 |
| ACE Center: Diagnostic and Recruitment Core                                      | \$236,921 | Q7.Other                 | University of California, Los Angeles             |
| Analyses of brain structure and connectivity in young children with autism       | \$238,042 | Q1.L.B                   | University of California, Davis                   |
| Training outpatient clinicians to deliver cognitive behavior therapy to children | \$238,101 | Q4.S.C                   | University of Colorado Denver                     |
| Neocortical mechanisms of categorical speech perception                          | \$239,255 | Q2.Other                 | University of California, San Francisco           |
| The impact of uncertainty in genome-wide testing for autism spectrum disorder    | \$240,000 | Q1.S.E                   | University of Pennsylvania                        |
| Serotonin, autism, and investigating cell types for CNS disorders                | \$246,794 | Q4.S.B                   | Washington University in St. Louis                |
| Testing the hyperspecificity hypothesis: A neural theory of autism               | \$247,018 | Q2.Other                 | Children's Hospital of Philadelphia               |

| Project Title  | Funding   | Strategic Plan Objective | Institution   |
|--|-----------|--------------------------|---|
| FOXP2-regulated signaling pathways critical for higher cognitive functions             | \$248,921 | Q3.Other                 | University of Texas Southwestern Medical Center           |
| Met signaling in neural development and circuitry formation                            | \$249,000 | Q2.Other                 | University of Arizona                                     |
| Investigating brain connectivity in autism at the whole-brain level                    | \$249,001 | Q2.Other                 | Indiana University  |
| Investigating the role of CNTNAP2 gene in vocal learning in mutant songbirds           | \$249,063 | Q4.S.B                   | University of Massachusetts Medical School                |
| Modeling 5-HT-absorbing neurons in neuropathology of autism                            | \$250,500 | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Optimization of fidelity procedures for pivotal response training in autism            | \$250,621 | Q5.L.A                   | Children's Hospital Research Center                       |
| ACE Center: Genetic and genomic analyses to connect genes to brain to cognition in ASD | \$252,243 | Q2.S.G                   | University of California, Los Angeles                     |
| Online training program for parents of children with autism spectrum disorder          | \$252,339 | Q5.L.A                   | Iris Media, Inc.  |
| Evaluating the time-dependent unfolding of social interactions in autism               | \$252,622 | Q2.Other                 | University of Cincinnati                                  |
| Functional circuit disorders of sensory cortex in ASD and RTT                          | \$254,976 | Q2.S.D                   | University of Pennsylvania                                |
| Development of an executive function-based intervention for ASD                        | \$255,420 | Q4.Other                 | Children's Research Institute                             |
| Core A: Administrative Services  | \$255,539 | Q7.Other                 | Vanderbilt University Medical Center                      |
| Neural mechanisms of tactile sensation in rodent somatosensory cortex                  | \$255,940 | Q2.Other                 | University of California, Berkeley                        |
| ACE Center: Auditory mechanisms of social engagement                                   | \$257,504 | Q1.Other                 | Yale University   |
| Early pharmacotherapy guided by biomarkers in autism (supplement)                      | \$260,000 | Q4.S.F                   | Wayne State University                                    |
| EEG complexity trajectory as an early biomarker for autism                             | \$261,000 | Q1.L.A                   | Boston Children's Hospital                                |
| Young development of a novel PET ligand for detecting oxytocin receptors in brain      | \$261,360 | Q2.Other                 | Emory University  |
| 3/3-Atomoxetine placebo and parent training in autism                                  | \$263,639 | Q4.S.F                   | University of Rochester                                   |
| Neural synchronydysfunction of gamma oscillations in autism                            | \$265,073 | Q2.Other                 | University of Colorado Denver                             |
| Divergent biases for conspecifics as early markers for autism spectum disorders        | \$269,604 | Q1.L.A                   | New York University                                       |
| 1/3-Atomoxetine placebo and parent training in autism                                  | \$269,976 | Q4.S.F                   | University of Pittsburgh                                  |
| Wireless EEG system for training attention and eye movement in ASD                     | \$271,250 | Q4.Other                 | University of California, San Diego                       |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                     |
|--|-----------|--------------------------|---|
| Studying the biology and behavior of autism at 1-year:<br>The Well-Baby Check-Up approach                | \$272,164 | Q1.L.A                   | University of California, San Diego             |
| Contingency analyses of observing and attending in intellectual disabilities                             | \$276,181 | Q4.S.G                   | University of Massachusetts Medical School      |
| Core E: Participant Recruitment & Assessment Services  | \$278,269 | Q7.Other                 | Vanderbilt University Medical Center            |
| Cortical circuit changes and mechanisms in a mouse model of fragile X syndrome                           | \$278,656 | Q2.S.D                   | University of Texas Southwestern Medical Center |
| ACE Center: Targeting joint engagement in infants at risk for ASD: Integrating treatment with biomarkers | \$279,987 | Q4.L.B                   | University of California, Los Angeles           |
| ACE Center: Augmenting language interventions for ASD: A translational approach                          | \$281,072 | Q4.L.A                   | University of California, Los Angeles           |
| Animal model of speech sound processing in autism  | \$283,249 | Q4.S.B                   | University of Texas at Dallas                   |
| 2/2-Effects of parent-implemented intervention for toddlers with autism spectrum disorder                | \$284,658 | Q4.S.D                   | Weill Cornell Medical College                   |
| ACE Center: Gaze perception abnormalities in infants with ASD  | \$286,420 | Q1.L.A                   | Yale University                                 |
| ACE Center: Eye-tracking studies of social engagement  | \$287,074 | Q1.L.B                   | Yale University                                 |
| ACE Center: Auditory perception and perceptual organization in minimally verbal children with ASD        | \$288,440 | Q2.L.B                   | Boston University                               |
| Insight into MeCP2 function raises therapeutic possibilities for Rett syndrome                           | \$290,087 | Q4.S.B                   | University of California, San Francisco         |
| The development of joint attention after infancy   | \$291,832 | Q1.L.C                   | Georgia State University                        |
| In vivo function of neuronal activity-induced MeCP2 phosphorylation                                      | \$292,721 | Q3.S.J                   | University of Wisconsin - Madison               |
| Do access barriers to autism care persist despite autism insurance mandate?                              | \$295,367 | Q5.S.A                   | Pennsylvania State University                   |
| Sensory adapted dental environments to enhance oral care for children with autism                        | \$296,952 | Q5.L.E                   | University of Southern California               |
| Effects of therapeutic horseback riding on children and adolescents with autism spectrum disorders       | \$298,618 | Q4.S.C                   | University of Colorado Denver                   |
| 1/3-Sequencing autism spectrum disorder extended pedigrees   | \$299,000 | Q3.L.B                   | University of Utah                              |
| Preschool reading and language interventions for children with autism                                    | \$299,795 | Q4.L.D                   | University of Washington                        |
| Imaging PTEN-induced changes in adult cortical structure and function in vivo                            | \$300,156 | Q2.Other                 | University of California, Los Angeles           |
| Partnering with autistic adults to develop tools to improve primary healthcare                           | \$300,938 | Q6.L.A                   | Oregon Health & Science University              |
| Cerebellar modulation of frontal cortical function   | \$302,306 | Q2.Other                 | University of Memphis                           |
| ACE Center: Administration and data management   | \$302,671 | Q7.Other                 | Boston University                               |

| Project Title   | Funding   | Strategic Plan Objective | Institution  |
|---|-----------|--------------------------|--|
| Are autism spectrum disorders associated with leaky-gut at an early critical period in development? | \$302,820 | Q1.L.A                   | University of California, San Diego  |
| Mechanisms of motor skill learning in the fragile X mouse model                                     | \$308,138 | Q2.S.D                   | University of Nebraska Medical Center  |
| Regulation of 22q11 genes in embroyonic and adult forebrain   | \$308,631 | Q2.S.D                   | George Washington University   |
| Neuronal basis of vicarious reinforcement dysfunction in autism spectrum disorder                   | \$310,081 | Q2.Other                 | Duke University  |
| Predicting phenotypic trajectories in Prader-Willi syndrome   | \$310,752 | Q2.S.D                   | Vanderbilt University Medical Center   |
| Development of intermodal perception of social events: Infancy to childhood                         | \$310,903 | Q1.L.C                   | Florida International University   |
| Caspr2 as an autism candidate gene: A proteomic approach to function & structure                    | \$312,000 | Q2.Other                 | University of Medicine & Dentistry of New Jersey -<br>Robert Wood Johnson Medical School |
| Perception of social and physical contingencies in infants with ASD                                 | \$312,944 | Q1.L.B                   | Emory University   |
| MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism                            | \$314,059 | Q2.S.D                   | University of Alabama at Birmingham  |
| ACE Center: Ontogeny and neural basis of social visual engagement in monkeys                        | \$314,068 | Q2.Other                 | Emory University   |
| NIMH IAN with the National Database for Autism Research program                                     | \$314,266 | Q7.H                     | National Institutes of Health  |
| ACE Center: Neuroimaging studies of connectivity in ASD   | \$315,268 | Q2.Other                 | Yale University  |
| Study of fragile X mental retardation protein in synaptic function and plasticity                   | \$317,077 | Q2.S.D                   | University of Texas Southwestern Medical Center  |
| Social and affective components of communication  | \$317,715 | Q2.Other                 | Salk Institute For Biological Studies  |
| Mechanisms of valproic acid-induced neurodevelopmental and behavioral defects                       | \$318,513 | Q3.S.J                   | University of Maryland, Baltimore  |
| Autoimmunity against novel antigens in neuropsychiatric dysfunction                                 | \$320,000 | Q2.S.A                   | University of Pennsylvania   |
| Impairments of theory of mind disrupt patterns of brain activity                                    | \$321,000 | Q2.Other                 | Massachusetts Institute of Technology  |
| Magnetoencephalographic studies of lexical processing and abstraction in autism                     | \$321,156 | Q2.Other                 | University of Pennsylvania   |
| Molecular dissection of calmodulin domain functions   | \$321,473 | Q2.Other                 | University of Iowa   |
| ACE Center: Rare variant genetics, contactin-related proteins and autism                            | \$324,189 | Q3.L.B                   | Yale University  |
| Statistical analysis of biomedical imaging data in curved space                                     | \$326,528 | Q2.Other                 | University of North Carolina at Chapel Hill  |
| Locus-specific imprinting on the mammalian X chromosome   | \$327,994 | Q3.S.J                   | University of Connecticut  |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                     |
|--|-----------|--------------------------|---|
| Inhibitory mechanisms for sensory map plasticity in cerebral cortex                  | \$328,644 | Q2.Other                 | University of California, Berkeley              |
| Cell specific genomic imprinfing during cortical development and in mouse models     | \$328,975 | Q3.S.J                   | Harvard University                              |
| ACE Center: Predicting risk and resilience in ASD through social visual engagement   | \$329,264 | Q2.L.B                   | Emory University                                |
| The microstructural basis of abnormal connectivity in autism                         | \$332,991 | Q2.Other                 | University of Utah                              |
| Molecular mechanisms linking early life seizures, autism and intellectual disability | \$333,473 | Q2.S.E                   | University of Colorado Denver                   |
| Patient iPS cells with copy number variations to model neuropsychiatric disorders    | \$336,050 | Q4.S.B                   | The Hospital for Sick Children                  |
| Development of a novel biomarker test for autism risk creening                       | \$336,569 | Q1.S.A                   | Xen Biofluidx, Inc.                             |
| Elucidating the function of class 4 semaphorins in GABAergic synapse formation       | \$336,922 | Q2.Other                 | Brandeis University                             |
| Novel genetic models of autism   | \$337,875 | Q4.S.B                   | University of Texas Southwestern Medical Center |
| reatment of medical conditions among individuals with utism spectrum disorders       | \$339,591 | Q2.S.E                   | National Institutes of Health                   |
| Novel statistical methods for DNA sequencing data, and applications to autism        | \$339,743 | Q3.L.B                   | Columbia University                             |
| Revealing protein synthesis defects in fragile X syndrome with new chemical tools    | \$340,520 | Q2.S.D                   | Stanford University                             |
| Physiology of attention and regulation in children with ASD and LD                   | \$341,013 | Q2.Other                 | Seattle Children's Hospital                     |
| Robot child interactions as an intervention tool for shildren with autism            | \$341,773 | Q4.Other                 | University of Connecticut                       |
| The genetic control of social behavior in the mouse                                  | \$342,540 | Q4.S.B                   | University Of Hawai'i at Manoa                  |
| he impact of Pten signaling on neuronal form and unction                             | \$346,014 | Q2.Other                 | Dartmouth College                               |
| Methylomic and genomic impacts of organic pollutants in Dup15q syndrome              | \$346,406 | Q3.S.J                   | University of California, Davis                 |
| Psychobiological investigation of the socioemotional unctioning in autism            | \$347,490 | Q2.Other                 | Vanderbilt University Medical Center            |
| Optimizing initial communication for children with autism                            | \$348,461 | Q4.S.G                   | University of Massachusetts Medical School      |
| /3-Atomoxetine placebo and parent training in autism                                 | \$350,730 | Q4.S.F                   | The Ohio State University                       |
| earning and plasticity in the human brain  | \$351,533 | Q2.Other                 | National Institutes of Health                   |
| Olfactory abnormalities in the modeling of Rett syndrome                             | \$351,575 | Q2.S.D                   | Johns Hopkins University                        |
| Development of face processing expertise   | \$351,984 | Q2.Other                 | University of Toronto                           |

| Project Title  | Funding   | Strategic Plan Objective | Institution   |  |
|--|-----------|--------------------------|---|--|
| Engrailed targets and the control of synaptic circuits in Drosophila                               | \$352,100 | Q2.Other                 | University of Puerto Rico Medical Sciences Campus   |  |
| The microRNA pathway in translational regulation of neuronal development                           | \$352,647 | Q2.S.D                   | University of Massachusetts Medical School          |  |
| Interdisciplinary training for autism researchers  | \$353,885 | Q7.K                     | University of California, Davis                     |  |
| Delayed motor learning in autism   | \$356,598 | Q4.Other                 | Brandeis University                                 |  |
| Emergence and stability of autism in fragile X syndrome  | \$358,000 | Q2.S.D                   | University of South Carolina                        |  |
| Neural basis of behavioral flexibility   | \$360,214 | Q2.Other                 | Mount Sinai School of Medicine                      |  |
| Extraction of functional subnetworks in autism using multimodal MRI                                | \$360,294 | Q1.L.B                   | Yale University                                     |  |
| ACE Center: Clinical Assessment Core   | \$362,584 | Q7.Other                 | Emory University                                    |  |
| Molecular components of A-type K+ channels   | \$363,366 | Q2.S.E                   | New York University School of Medicine              |  |
| Cellular density and morphology in the autistic temporal human cerebral cortex                     | \$363,672 | Q2.Other                 | University of California, Davis                     |  |
| ACE Center: Inter-regional connectivity in the speech network of minimally verbal children         | \$365,407 | Q4.S.G                   | Boston University                                   |  |
| Exploring the neuronal phenotype of autism spectrum disorders using induced pluripotent stem cells | \$366,529 | Q4.S.B                   | Stanford University                                 |  |
| Early social and emotional development in toddlers at genetic risk for autism                      | \$369,179 | Q1.L.A                   | University of Pittsburgh                            |  |
| Linking local activity and functional connectivity in autism                                       | \$370,304 | Q2.Other                 | San Diego State University                          |  |
| Prostaglandins and cerebellum development  | \$371,250 | Q2.S.A                   | University of Maryland, Baltimore                   |  |
| Adaptive response technology for autism spectrum disorders intervention                            | \$371,470 | Q4.Other                 | Vanderbilt University Medical Center                |  |
| Investigation of DUF1220 domains in human brain function and disease                               | \$376,668 | Q3.L.B                   | University of Colorado Denver                       |  |
| ACE Center: Testing the efficacy of a novel intervention for minimally verbal children with ASD    | \$377,590 | Q4.S.G                   | Boston University                                   |  |
| Synaptic processing in the basal ganglia   | \$377,815 | Q2.Other                 | University of Washington                            |  |
| Neural economics of biological substrates of valuation   | \$379,913 | Q1.L.C                   | Virginia Polytechnic Institute and State University |  |
| Towards an endophenotype for amygdala dysfunction  | \$380,304 | Q2.Other                 | California Institute of Technology                  |  |
| Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder                         | \$380,625 | Q2.S.D                   | Beth Israel Deaconess Medical Center                |  |
| Mechanisms of stress-enhanced aversive conditioning  | \$381,250 | Q4.S.B                   | Northwestern University                             |  |
| Imaging signal transduction in single dendritic spines   | \$382,200 | Q2.Other                 | Duke University                                     |  |
| The role of MeCP2 in Rett syndrome   | \$382,858 | Q2.S.D                   | University of California, Davis                     |  |
| Molecular mechanisms of the synaptic organizer alphaneurexin                                       | \$383,267 | Q2.Other                 | University of Michigan                              |  |

| Project Title  | Funding   | Strategic Plan Objective | Institution   |
|--|-----------|--------------------------|---|
| Typical and pathological cellular development of the human amygdala                | \$385,000 | Q2.Other                 | University of California, Davis                     |
| Treatment of Autism Symptoms in Children (TASC): Initial RCT with active control   | \$385,000 | Q4.Other                 | University of California, Los Angeles               |
| Neuroimaging of top-down control and bottom-up processes in childhood ASD          | \$387,066 | Q2.Other                 | Georgetown University                               |
| Auditory and integrative functions of the prefrontal cortex                        | \$387,285 | Q2.Other                 | University of Rochester                             |
| Neuroligin function in vivo: Implications for autism and mental retardation        | \$388,575 | Q4.S.B                   | University of Texas Southwestern Medical Center     |
| Allelic choice in Rett syndrome  | \$390,481 | Q2.S.D                   | Winifred Masterson Burke Medical Research Institute |
| ACE Center: Changing developmental trajectories through early treatment            | \$390,669 | Q4.L.D                   | Emory University                                    |
| 2/3-Multisite RCT of early intervention for spoken communication in autism         | \$391,019 | Q4.S.F                   | University of Rochester                             |
| The genetic and neuroanatomical origin of social behavior                          | \$391,250 | Q4.S.B                   | Baylor College of Medicine                          |
| A family-genetic study of language in autism                                       | \$391,295 | Q2.S.G                   | Northwestern University                             |
| Cellular and genetic correlates of increased head size in autism spectrum disorder | \$393,455 | Q4.S.B                   | Yale University                                     |
| Synaptic phenotype, development, and plasticity in the fragile X mouse             | \$395,134 | Q2.S.D                   | University of Illinois at Urbana Champaign          |
| Vasopressin receptor polymorphism and social cognition                             | \$395,156 | Q2.Other                 | Georgia State University                            |
| Neurobiological signatures of social dysfunction and repetitive behavior           | \$395,672 | Q4.S.B                   | Vanderbilt University Medical Center                |
| Motor skill learning in autism   | \$395,908 | Q2.Other                 | Kennedy Krieger Institute                           |
| Translational regulation of adult neural stem cells                                | \$396,944 | Q2.S.D                   | University of Wisconsin - Madison                   |
| Striatal synaptic abnormalities in models of autism                                | \$397,396 | Q4.S.B                   | University of Texas Southwestern Medical Center     |
| Language development and outcome in children with autism                           | \$397,425 | Q1.L.C                   | University of Connecticut                           |
| Shank3 in synaptic function and autism   | \$401,250 | Q2.Other                 | Massachusetts Institute of Technology               |
| Neuroendocrine regulation of metabolism and neurocognition                         | \$402,805 | Q2.S.E                   | National Institutes of Health                       |
| Characterization of the schizophrenia-associated 3q29 deletion in mouse            | \$404,198 | Q4.S.B                   | Emory University                                    |
| High throughput screen for small molecule probes for neural network development    | \$405,000 | Q2.Other                 | Johns Hopkins University                            |
| Mechanisms of mGluR5 function and dysfunction in mouse autism models               | \$406,760 | Q2.S.D                   | University of Texas Southwestern Medical Center     |
| Social evaluation in infants and toddlers  | \$409,613 | Q1.L.B                   | Yale University                                     |

| Project Title   | Funding   | Strategic Plan Objective | Institution  |
|---|-----------|--------------------------|--|
| Development of face processing in infants with autism spectrum disorders                            | \$409,613 | Q1.L.B                   | Yale University  |
| Morphogenesis and function of the cerebral cortex   | \$409,613 | Q2.Other                 | Yale University  |
| Selective disruption of hippocampal dentate granule cells in autism: Impact of PT                   | \$411,292 | Q2.S.E                   | Cincinnati Children's Hospital Medical Center            |
| Social brain networks for the detection of agents and intentions                                    | \$414,688 | Q2.Other                 | Yale University  |
| Dysregulation of mTOR signaling in fragile X syndrome   | \$415,000 | Q2.S.D                   | Albert Einstein College of Medicine of Yeshiva Universit |
| Molecular analysis of bipolar and schizophrenia candidate genes                                     | \$415,000 | Q3.S.J                   | Albert Einstein College of Medicine of Yeshiva Universit |
| 1/5-Randomized trial of parent training for young children with autism                              | \$415,097 | Q4.S.D                   | Yale University  |
| Restricted repetitive behavior in autism  | \$416,315 | Q1.L.B                   | University of North Carolina at Chapel Hill              |
| Glial control of neuronal receptive ending morphology   | \$418,275 | Q2.Other                 | The Rockefeller University                               |
| New approaches to local translation: SpaceSTAMP of proteins synthesized in axons                    | \$419,095 | Q2.S.D                   | Dana-Farber Cancer Institute                             |
| Role of Sema7A in functional organization of neocortex  | \$423,750 | Q2.S.D                   | Mount Sinai School of Medicine                           |
| Longitudinal studies of autism spectrum disorders: 2 to 23  | \$426,762 | Q6.L.B                   | Weill Cornell Medical College                            |
| 1/2-Effects of parent-implemented intervention for toddlers with autism spectrum disorder           | \$427,655 | Q4.S.D                   | Florida State University                                 |
| Behavioral and neural processing of faces and expressions in nonhuman primates                      | \$435,600 | Q2.Other                 | Emory University   |
| Genetic and developmental analyses of fragile X mental retardation protein                          | \$438,391 | Q2.S.D                   | Vanderbilt University Medical Center                     |
| Oxytocin receptors and social behavior  | \$440,363 | Q4.S.B                   | Emory University   |
| Integrative functions of the planum temporale   | \$440,810 | Q2.Other                 | University of California, Irvine                         |
| ACE Network: A comprehensive approach to identification of autism susceptibility genes (supplement) | \$442,627 | Q3.L.B                   | University of California, Los Angeles                    |
| Parenting your young child with autism: A web-based tutorial  | \$443,005 | Q5.L.A                   | Center for Psychological Consultation                    |
| Multimedia tool for psychology graduate student ASD assessment training                             | \$447,062 | Q1.S.A                   | Virtual Reality Aids, Inc.                               |
| Autism Registry   | \$447,613 | Q7.C                     | Group Health Cooperative                                 |
| Sensory mechanisms and self-injury  | \$447,738 | Q2.S.E                   | University of Minnesota                                  |
| Networked cortical responses to movement associated with ASD  | \$449,700 | Q2.Other                 | University of Washington                                 |
| The effects of State and Federal insurance policies on quality of care for autism                   | \$450,534 | Q5.S.A                   | Pennsylvania State University                            |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| Autism iPSCs for studying function and dysfunction in human neural development                                    | \$460,152 | Q4.S.B                   | Scripps Research Institute                                |
| High-throughput DNA sequencing method for probing the connectivity of neural circuits at single-neuron resolution | \$464,475 | Q2.Other                 | Cold Spring Harbor Laboratory                             |
| Engrailed genes and cerebellum morphology, spatial gene expression and circuitry                                  | \$470,003 | Q2.Other                 | Sloan-Kettering Institute for Cancer Research             |
| BDNF and the restoration of synaptic plasticity in fragile X and autism   | \$470,063 | Q2.S.D                   | University of California, Irvine                          |
| Sensory experiences in children with autism   | \$472,116 | Q1.Other                 | University of North Carolina at Chapel Hill               |
| The ontogeny of social visual engagement in infants at risk for autism  | \$473,149 | Q1.L.A                   | Emory University  |
| Function of neurexins   | \$473,710 | Q2.Other                 | Stanford University                                       |
| Analysis of Shank3 complete and temporal and spatial specific knockout mice                                       | \$481,448 | Q2.Other                 | Duke University   |
| Identifying therapeutic targets for autism using Shank3-<br>deficient mice  | \$484,667 | Q4.S.B                   | Mount Sinai School of Medicine                            |
| Cell adhesion molecules in autism: A whole-brain study of genetic mouse models                                    | \$485,438 | Q2.Other                 | Cold Spring Harbor Laboratory                             |
| Development of the functional neural systems for face expertise   | \$507,685 | Q2.Other                 | University of California, San Diego                       |
| ACE Center: Assessment Core   | \$510,544 | Q1.L.A                   | Yale University   |
| Characterizing the genetic systems of autism through multi-disease analysis                                       | \$524,280 | Q2.S.G                   | Harvard Medical School                                    |
| Administrative Core   | \$529,146 | Q7.Other                 | University of North Carolina at Chapel Hill               |
| Autistic traits: Life course & genetic structure  | \$531,127 | Q2.S.G                   | Washington University in St. Louis                        |
| Cell adhesion molecules in CNS development  | \$534,562 | Q2.Other                 | The Scripps Research Institute - California               |
| Neurobiological correlates of language dysfunction in autism spectrum disorders                                   | \$535,052 | Q2.Other                 | The Mind Research Network                                 |
| 1/3-Multisite RCT of early intervention for spoken communication in autism  | \$540,947 | Q4.S.F                   | University of California, Los Angeles                     |
| Function and structure adaptations in forebrain development   | \$541,770 | Q2.Other                 | University of Southern California                         |
| Sensory processing and integration in autism  | \$548,158 | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Genetic epidemiology of complex traits  | \$559,192 | Q3.L.B                   | National Institutes of Health                             |
| Autism spectrum disorder: Birth cohort 1976-2000, epidemiology and adult status                                   | \$560,556 | Q6.Other                 | Mayo Clinic   |
| Electronic location reporting for individuals with cognitive disabilities   | \$561,963 | Q4.S.H                   | Intellispeak, LLC   |
| An open resource for autism iPSCs and their derivatives   | \$562,927 | Q7.D                     | Children's Hospital of Orange County                      |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                 |
|--|-----------|--------------------------|---|
| Executive function in children with typical and atypical language abilities      | \$564,177 | Q2.Other                 | University of Wisconsin - Madison           |
| ACE Network: A longitudinal MRI study of infants at risk for autism (supplement) | \$565,115 | Q2.L.A                   | University of North Carolina at Chapel Hill |
| Effects of chronic intranasal oxytocin   | \$568,507 | Q4.S.B                   | University of California, Davis             |
| Taste, smell, and feeding behavior in autism: A quantitative traits study        | \$570,508 | Q2.Other                 | University of Rochester                     |
| ACE Center: Clinical Core  | \$575,083 | Q7.Other                 | Boston University                           |
| The roles of environmental risks and GEX in increasing ASD prevalence            | \$575,290 | Q3.L.D                   | Yale University                             |
| Language development in fragile X syndrome                                       | \$584,381 | Q2.S.D                   | University of California, Davis             |
| fcMRI in infants at high risk for autism   | \$584,566 | Q1.L.A                   | Washington University in St. Louis          |
| Infants at risk of autism: A longitudinal study                                  | \$587,150 | Q1.L.A                   | University of California, Davis             |
| Early quantitative characterization of reciprocal social behavior                | \$590,421 | Q1.L.C                   | Washington University in St. Louis          |
| The social brain in schizophrenia and autism spectrum disorders                  | \$594,733 | Q2.Other                 | Hartford Hospital                           |
| Prenatal and neonatal biologic markers for autism                                | \$609,792 | Q3.S.C                   | Kaiser Foundation Research Institute        |
| A longitudinal MRI study of brain development in fragile X syndrome              | \$610,416 | Q2.S.D                   | University of North Carolina at Chapel Hill |
| Genome-wide identification of variants affecting early human brain development   | \$611,005 | Q2.S.G                   | University of North Carolina at Chapel Hill |
| Characterizing mechanistic heterogeneity across ADHD and autism                  | \$611,788 | Q2.Other                 | Oregon Health & Science University          |
| Genotype-phenotype relationships in fragile X families                           | \$612,413 | Q2.S.D                   | University of California, Davis             |
| Brain bases of language deficits in SLI and ASD                                  | \$614,180 | Q2.Other                 | Massachusetts Institute of Technology       |
| Human neurobehavioral phenotypes associates with the extended PWS/AS domain      | \$618,967 | Q3.S.J                   | Baylor College of Medicine                  |
| A neuroimaging study of twin pairs with autism                                   | \$625,557 | Q2.S.G                   | Stanford University                         |
| Epigenetic and transcriptional dysregulation in autism spectrum disorder         | \$629,805 | Q3.S.J                   | University of California, Los Angeles       |
| Biomarkers in Autism of Aripiprazole and Risperidone Treatment (BAART)           | \$634,243 | Q4.S.F                   | Medical University of South Carolina        |
| GABRB3 and placental vulnerability in ASD  | \$642,258 | Q2.S.A                   | Stanford University                         |
| Dynamic regulation of Shank3 and ASD   | \$646,316 | Q2.Other                 | Johns Hopkins University                    |
| Mathematical cognition in autism: A cognitive and systems neuroscience approach  | \$652,461 | Q2.Other                 | Stanford University                         |
| Social-emotional development of infants at risk for autism spectrum disorders    | \$662,677 | Q1.L.B                   | University of Washington                    |

| Project Title   | Funding   | Strategic Plan Objective | Institution                                |  |
|---|-----------|--------------------------|--|--|
| Next generation gene discovery in familial autism                                 | \$688,392 | Q3.L.B                   | University of Washington                   |  |
| Gene dosage imbalance in neurodevelopmental disorders                             | \$689,795 | Q1.S.E                   | Weis Center for Research - Geisinger Clinc |  |
| Rapid phenotyping for rare variant discovery in autism                            | \$700,956 | Q3.S.A                   | University of California, Los Angeles      |  |
| Social-affective bases of word learning in fragile X syndrome and autism          | \$703,969 | Q1.Other                 | University of California, Davis            |  |
| RNA expression patterns in autism   | \$710,306 | Q3.L.B                   | Boston Children's Hospital                 |  |
| Kinetics of drug macromolecule complex formation                                  | \$712,921 | Q2.Other                 | University of California, San Diego        |  |
| Population-based autism genetics & environment study                              | \$723,934 | Q3.L.D                   | Mount Sinai School of Medicine             |  |
| Novel computational methods for higher order diffusion MRI in autism              | \$725,545 | Q2.Other                 | University of Pennsylvania                 |  |
| Predicting useful speech in children with autism                                  | \$726,467 | Q1.L.B                   | Vanderbilt University Medical Center       |  |
| Computational characterization of language use in autism spectrum disorder        | \$738,723 | Q2.Other                 | Oregon Health & Science University         |  |
| Intelligent data capture and assessment technology for developmental disabilities | \$744,906 | Q1.S.B                   | Caring Technologies, Inc.                  |  |
| A family-genetic study of autism and fragile X syndrome                           | \$751,420 | Q2.S.D                   | Northwestern University                    |  |
| Software to enrich the noun lexicons and lexical learning of children with autism | \$756,189 | Q4.L.D                   | Laureate Learning Systems, Inc.            |  |
| The role of germline mutation and parental age in autism spectrum disorders       | \$757,596 | Q3.S.C                   | University of California, San Diego        |  |
| Dissecting the neural control of social attachment                                | \$764,775 | Q4.S.B                   | University of California, San Francisco    |  |
| Impact of SynGAP1 mutations on synapse maturation and cognitive development       | \$789,981 | Q2.Other                 | The Scripps Research Institute - Florida   |  |
| Animal model of genetics and social behavior in autism spectrum disorders         | \$791,070 | Q2.S.G                   | Duke University                            |  |
| Using induced pluripotent stem cells to identify cellular phenotypes of autism    | \$792,000 | Q4.S.B                   | Stanford University                        |  |
| The genetic basis of mid-hindbrain malformations                                  | \$798,866 | Q2.S.G                   | Seattle Children's Hospital                |  |
| Effectiveness and implementation of a mental health intervention for ASD          | \$804,837 | Q5.L.A                   | University of California, San Diego        |  |
| Autism: Social and communication predictors in siblings                           | \$805,136 | Q1.L.A                   | Kennedy Krieger Institute                  |  |
| 3/3-Multisite RCT of early intervention for spoken communication in autism        | \$813,835 | Q4.S.F                   | Kennedy Krieger Institute                  |  |
| Toward outcome measurement of anxiety in youth with autism spectrum disorders     | \$829,922 | Q1.L.B                   | Yale University                            |  |
| Autism genetics: Homozygosity mapping and functional validation                   | \$850,815 | Q3.S.A                   | Boston Children's Hospital                 |  |
| National Database on Autism Research  | \$900,000 | Q7.H                     | Center for Information Technology          |  |

| Project Title   | Funding     | Strategic Plan Objective | Institution                                 |  |
|---|-------------|--------------------------|---|--|
| Longitudinal MRI study of brain development in fragile X                                      | \$901,844   | Q2.S.D                   | Stanford University                         |  |
| Neurobehavioral research on infants at risk for SLI and autism                                | \$944,962   | Q1.L.A                   | Boston University                           |  |
| Animal models Of neuropsychiatric disorders   | \$974,415   | Q4.S.B                   | National Institutes of Health               |  |
| Early detection of pervasive developmental disorders  | \$992,563   | Q1.S.A                   | University of Connecticut                   |  |
| ACE Network: Multigenerational FamIlial and Environmental Risk for Autism (MINERvA) Network   | \$1,000,000 | Q3.L.D                   | Mount Sinai School of Medicine              |  |
| The cognitive neuroscience of autism spectrum disorders                                       | \$1,074,095 | Q2.Other                 | National Institutes of Health               |  |
| Dysregulation of protein synthesis in fragile X syndrome                                      | \$1,117,731 | Q2.S.D                   | National Institutes of Health               |  |
| Functional anatomy of face processing in the primate brain                                    | \$1,660,304 | Q2.Other                 | National Institutes of Health               |  |
| Studies of genetic and metabolic disorders, autism and premature aging                        | \$1,667,480 | Q4.S.B                   | National Institutes of Health               |  |
| Autism risk, prenatal environmental exposures, and pathophysiologic markers                   | \$1,815,424 | Q3.S.C                   | University of California, Davis             |  |
| Environment, the perinatal epigenome, and risk for autism and related disorders               | \$1,976,271 | Q3.S.J                   | Johns Hopkins University                    |  |
| Roles of oxytocin and vasopressin in brain  | \$1,990,068 | Q4.S.B                   | National Institutes of Health               |  |
| ACE Network: Early pharmacotherapy guided by biomarkers in autism                             | \$1,996,122 | Q4.S.F                   | Wayne State University                      |  |
| Omnitec Solution for the NIMH National Database for Autism Research                           | \$2,204,000 | Q7.H                     | National Institutes of Health               |  |
| Clinical and behavioral phenotyping of autism and related disorders                           | \$2,241,297 | Q1.L.B                   | National Institutes of Health               |  |
| Genomic and epigenomic effects of large CNV in neurons from iPSC                              | \$2,355,000 | Q2.S.G                   | Stanford University                         |  |
| Pediatric brain imaging   | \$2,419,583 | Q2.L.A                   | National Institutes of Health               |  |
| ACE Network: Study of Oxytocin in Autism to Improve<br>Reciprocal Social Behaviors (SOARS-B)  | \$2,589,347 | Q4.L.A                   | University of North Carolina at Chapel Hill |  |
| ACE Network: A longitudinal MRI study of infants at risk for autism                           | \$2,619,590 | Q2.L.A                   | University of North Carolina at Chapel Hill |  |
| ACE Network: A comprehensive approach to identification of autism susceptibility genes        | \$2,631,440 | Q3.L.B                   | University of California, Los Angeles       |  |
| ACE Network: Early biomarkers of autism spectrum disorders in infants with tuberous sclerosis | \$2,649,781 | Q1.L.A                   | Boston Children's Hospital                  |  |
| ACE Network: Adaptive interventions for minimally verbal children with ASD in the community   | \$2,755,427 | Q4.S.G                   | University of California, Los Angeles       |  |
| ACE Network: Early Autism Risk Longitudinal Investigation (EARLI) Network                     | \$2,835,202 | Q3.L.A                   | Drexel University                           |  |

| Project Title   | Funding      | Strategic Plan Objective | Institution                   |
|---|--------------|--------------------------|-------------------------------|
| Gene-environment interactions in an autism birth cohort                           | \$3,012,046  | Q3.L.D                   | Columbia University           |
| ACE Network: Multimodal developmental neurogenetics of females with ASD           | \$3,118,985  | Q2.S.B                   | Yale University               |
| Neonatal biomarkers in extremely preterm babies predict childhood brain disorders | \$3,478,718  | Q3.S.H                   | Boston Medical Center         |
| Office of the Scientific Director   | \$11,422,709 | Q7.Other                 | National Institutes of Health |